

REMARKS

Claims 1, 3-9, 11-13 and 15-22 are pending. Independent claims 1 and 11 have been amended by the present amendment. Claims 3, 7 and 12 have been amended to prevent and/or correct claim dependency error. Claims 2, 10 and 14 have been cancelled without prejudice. The amendments are fully supported by the application as originally filed (see, e.g., page 7, line 22 to page 8, line 1, page, 14, lines 14-15, page 4, lines 9-12, and page 14, lines 1-4 of the specification). No new matter has been added.

Claim Rejections – 35 U.S.C. §102

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Kleinmeyer, et al (U.S. 2002/0089094 A1). Claims 1, 3 and 8 were rejected under 35 U.S.C. §102(e) as being anticipated by Lee, et al. (U.S. 2002/0122840 A1). The rejections are respectfully traversed.

As amended, independent claim 1 recites an apparatus for producing nanofiber utilizing electrospinning in which (i) a spinning unit has at least one spinning nozzle pack (126) in which a plurality of spinning nozzles (122) are arranged in series; (ii) a control unit (140) is positioned at both longitudinal sides of the spinning nozzle pack; (iii) an induction unit (150) is positioned between the control unit and the collector and a voltage of same polarity and same value as the control unit is applied to the induction unit; and (iv) a carrier unit (180) is positioned above a collector (130) and carries a pilling material (182). (see claim 1 and Figs. 1 and 2)

Regarding the rejection of independent claim 1 over Kleinmeyer, the Kleinmeyer reference does not teach or suggest the above-described features of claim 1. First, the Kleinmeyer reference does not disclose a carrier unit (180) positioned above a collector (130) as required in claim 1; it merely discloses collecting means (70) (see paragraph 0026 and Fig. 1). Second, nothing in the Kleinmeyer reference teaches a spinning nozzle pack (126) in which a plurality of spinning nozzles (122) are arranged in series, as required in claim 1; it merely discloses an orifice (30) (see Fig. 1). Third, the Kleinmeyer reference does not disclose a control unit (140) positioned at both longitudinal sides of the spinning nozzle pack, as required in claim 1; it merely discloses an electrode (55a) positioned below the orifice (30) (see Fig. 1). Fourth, the Kleinmeyer reference does not disclose an induction unit (150) to which a voltage of same polarity

and same value as the control unit is applied, as required in claim 1; it merely discloses an electrode (56a) to which a linear voltage gradient is applied (see paragraphs 42, 44 and Fig. 2).

Regarding the rejection of independent claim 1 over Lee, the Lee reference does not teach or suggest the above-described features of claim 1. First, the Lee reference does not disclose a carrier unit (180) positioned above a collector (130) as required in claim 1; it merely discloses a collector (50) (see paragraph 0025 and Figs. 1a and 1b). Second, nothing in the Lee reference teaches a spinning nozzle pack (126) in which a plurality of spinning nozzles (122) are arranged in series, as required in claim 1; it merely discloses a plurality of spinning nozzles (31) (see Figs. 1a and 1b). Third, the Lee reference does not disclose a control unit (140) positioned at both longitudinal sides of the spinning nozzle pack, as required in claim 1; it merely discloses a conductor board (30) positioned at an outer side of each of the spinning nozzles (31) (see Figs. 1a and 1b). Fourth, nothing in the Lee reference teaches an induction unit (150) to which a voltage of same polarity and same value as the control unit is applied, as required in claim 1.

For at least the reasons discussed above, neither the Kleinmeyer reference nor the Lee reference discloses, teaches and suggests the features of claim 1 and their dependent claims 3 and 8.

Therefore, Applicants respectfully request withdrawal of the §102 rejections.

Claim Rejections – 35 U.S.C. §103

Claims 4-7, 9, 11-13 and 15-22 were rejected as being obvious over either Kleinmeyer or Lee in view of Haynes, James, Kaun, Wnuk or Lu. The rejections are respectfully traversed.

The rejections of claims 4-7 and 9 relies upon the assumption that the primary references, Kleinmeyer and Lee, satisfy some of the requirements of claim 1. As discussed above, however, the Kleinmeyer and Lee references, either alone or in combination, do not disclose, teach or suggest the features of claim 1. Further, none of

the secondary references, Haynes, James, Kaun, Wnuk and Lu, does not remedy the deficiencies of the primary references.

In addition to the above-discussed different technical constitutions, the purposes of Kleinmeyer and Lee reference are different from that of the present invention. More specifically, the purpose of Kleinmeyer was to prevent spiraling or corkscrew motion of charged filaments discharged from a plurality of spinning nozzles. The purpose of Lee was to set surrounding environments of a plurality of spinning nozzles such that charged filaments may be uniformly discharged from the spinning nozzles. By contrast, the purpose of the present invention is to prevent charged filaments discharged from a spinning nozzle pack from departing from a limited area (see page 3, lines 15-18 of the specification).

For at least the reasons discussed above, claim 1 and its dependent claims 4-7 and 9 would not have been obvious to one of ordinary skill in the art.

Regarding the rejection of independent claim 11, since claim 11 has been amended to incorporated the feature of claim 14 which has been acknowledged allowable by the Examiner (see page 2 of the Office Action), the rejections of claim 11 and its dependent claims 12, 13 and 15-22 should be withdrawn.

Accordingly, Applicants respectfully request withdrawal of the §103 rejections.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

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Respectfully submitted,

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